

**Amendments to the Specification:**

Please replace the following paragraph beginning on page 3 at line 15 and continuing through page 4, line 4 with the following replacement paragraph:

A power line and a signal line can act as paths along which conduction noise developing in an LSI travels. In consideration of an electromagnetic field in the vicinity of an LSI, noise which results from variation in an electric current of a power source being emitted from a power line serving as an antenna is considered to be dominant. There may be a case where a ringing overshoot stemming from variation in a signal poses a problem. However, there more frequently arises a case where variation in an internal power level of an LSI propagates as a signal waveform, to thereby present[[s]] a problem. Noise emitted from a power line or a signal line is considered to have a strong correlation with variation in the electric current of a power source (hereinafter referred to as a "source current").

Please replace the last paragraph beginning on page 12 which continues on page 13 with the following replacement paragraph:

The signal pattern storage means 1002 stores a pattern of signal change applied to information concerning connections of a circuit to be analyzed. As shown in FIG. 111, a pattern of change in a signal input to the input port CLK and a pattern of change in a signal input to the input port D shown in FIG. 110 are stored in the signal pattern storage means 1002 in advance. The horizontal axis in FIG. 11[[0]]1 represents the time at which change arises in a signal pattern. Upon each change, the signal pattern is changed between a logic value of 0 and a logic value of 1.

Please replace the last paragraph beginning on page 15 and continuing onto page 16 with the following replacement paragraph:

In a case where information concerning the total amount of electric current is calculated in greater detail, a load dependence coefficient of a current which is dependent on an output load capacitance (or on a charge current) and the total amount of electric current which is not dependent on an output load capacitance (or on a short circuit current) are stored in an element current storage section. Thereafter, information concerning the capacitance of each wiring (i.e., capacitance

information) is read, the sum of the load-independent current and the product of the capacitance information and the load dependence coefficient is taken as the total amount of electric current. As described above, according to the conventional gate-level power consumption calculation method shown in Fig. 110, the amount of electric current flowing upon a single change arising in a signal appearing at an input or output pin is taken as a unit or as flowing momentarily. In other words, the conventional method determines only the total amount of electric current. In terms of power consumption, the accuracy of the thus-calculated total amount of current is sufficient. However, EMI analysis requires information concerning chronological change in electric current, and the total amount of electric current is not sufficient in terms of EMI analysis.

Please replace the first full paragraph on page 21 with the following replacement paragraph:

Preferably, the modeling step includes a step of calculating a drop in voltage from the amount of electric current flowing in each cell and the resistance of a power line and correcting the amount of instantaneous electric current of each cell for each event, on the basis of the relationship between the drop in voltage and the amount of instantaneous electric current.

Please replace the first full paragraph on page 23 with the following replacement paragraph:

Preferably, the modeling step includes a calculation step of calculating the height of a rectangular waveform from a library in which peak currents of cells are characterized according to the type of cell, and a rectangular waveform modeling step of modeling the amount of instantaneous electric current as a rectangular waveform, [[ ]] the peak current calculated in the calculation step being taken as the height of the rectangular waveform and the area of the [[tri]]rectangular waveform being equal to the amount of electric current of each event, and the FFT processing step includes a step of subjecting to FFT processing information concerning a change in current, the information being calculated in the rectangular waveform modeling step.

Please replace the last paragraph on page 25 with the following replacement paragraph:

Preferably, the electromagnetic interference analysis method as defined in any one of ~~the claims 15 through 23~~, wherein the analysis method calculation step includes a step of modeling the amount of instantaneous electric current while separating the same into a short circuit electric current component and a charge current component.

Please replace the first paragraph on page 26 with the following replacement paragraph:

Preferably, the modeling step includes a triangular waveform modeling step of modeling the instantaneous current as a triangular waveform whose width is calculated for each event information in consideration of slew information (i.e., an output slew) for an output terminal of a cell to ~~[[for]]~~ each event information such that the area of the triangular waveform becomes equal to the amount of electric current of each event, the height of the triangular waveform being calculated on the basis of the width, and the FFT processing step includes a step of subjecting to FFT processing information concerning a change in current, the information being calculated in the triangular waveform modeling step.